

Serial No.: 10/632,263
Art Unit: 3732

REMARKS

Disposition of Claims

Upon entry of the foregoing amendments, claims 1-21 will remain pending in the application and stand ready for further action on the merits. Claim 1 has been amended to clarify that the handle includes a threaded opening for receiving a tool tip connector. On one end, the connector includes an opening for receiving the tool tip and on the second end, the connector includes a threaded stem. The connector is fastened securely to the handle by means of a threading mechanism. Particularly, the threads of the connector stem engage the complementary threads in the opening of the handle. Claim 13 has been amended so that it is now dependent upon Claim 12. Claim 19 has been amended in a manner similar to amended claim 1. More specifically, Claim 19 recites a first and second tool tip along with a handle having a first threaded opening for receiving a first tool tip connector and a second threaded opening for receiving a second tool tip connector. In addition, Claim 21 has been amended to clarify that the metal tie bar includes a first threaded end for connecting the first tool tip, and an opposing second threaded end for connecting the second tool tip. The amendments are supported throughout the specification, particularly at page 3, paragraph 2; page 5, paragraph 4; page 6, paragraph 1 and by the drawings, particularly FIGS. 2A, 2B, 2C, 7A, 7B, and 7C. Claims 17 and 18 have been canceled without prejudice or disclaimer of the subject matter contained therein. The limitations of Claims 17 and 18 have been incorporated into amended Claims 1 and 19.

Claim Objections – Informalities

The Office Action objects to Claim 1, because it includes the clause, “said first and said second enlarged end region each having having . . .” The terms, “having” and “having” are duplicative. Claim 1 has been amended herein to correct this typographical error.

Claim Rejections Under 35 U.S.C. §112

The Office Action objects to Claim 13 under 35 U.S.C. §112, second paragraph asserting that the clause, “said plurality of colors” does not have sufficient antecedent basis. Claim 13 has been amended so that it now depends upon Claim 12, which clearly provides sufficient antecedent basis.

Serial No.: 10/632,263
Art Unit: 3732

Claim Rejections Under 35 U.S.C. §103

The Office Action rejects claims 1-9 and 11-21 under 35 U.S.C. §103(a) as being unpatentable over Currie, U.S. Patent 5,178,537 ("Currie") in view of Ferranti, published U.S. Patent Application 2001/0031443 ("Ferranti"). It is respectfully submitted that the presently claimed invention, as recited in amended claims 1-9 and 11-21, is not prima facie obvious over the disclosures in Currie and Ferranti for the reasons discussed below.

Applicants agree with the Examiner that Currie generally discloses a dental instrument and particularly a periodontal probe for measuring the depth of periodontal pockets below the gumline. Referring to FIG. 2 in Currie, the probe instrument includes an elongated handle (12) and a removable probe tip (14). Currie stresses the importance of the material used to make the probe tip. The probe tip must have sufficient strength so that it does not break off, but it also must be flexible. The dentist is expected to dispose of the probe tip after it has been used only once on a patient. In Currie, the probe tip is preferably made of nylon. This sharply contrasts with Applicant's tool tip, which is preferably metallic. Secondly, as the Examiner recognizes, Currie does not disclose or suggest fitting the probe handle with a plastic cover to provide an improved gripping surface.

Turning to the disclosure in Ferranti, the Examiner points out that this reference discloses a removable plastic sleeve that is placed over the handle of a dental instrument, for example, a scaler or curette. A soft, semi-transparent or translucent silicone is preferably used as the material to make the sleeve. Referring to FIGS. 2 and 3, the external contour of the elongated sleeve (10) includes a concave-shaped central region (19). Enlarged end regions (17, 18) are located at opposing ends of the sleeve. The Examiner takes the position that it would have been obvious to modify the structure of the periodontal probe, as described in Currie, so that included a removable plastic sleeve, as described in Ferranti. The Examiner asserts that it would have been obvious to outfit the handle of the probe in Currie with the removable, elastomeric sleeve described in Ferranti. The Examiner recognizes that Ferranti teaches slip-fitting the sleeve over the handle and Ferranti emphasizes the importance of being able to apply and remove the sleeve as needed. Because the sleeve can be so easily removed, the dentist is not limited to fitting only certain instruments with the sleeve (Para. 20).

Serial No.: 10/632,263
Art Unit: 3732

However, it is respectfully submitted that even if the disclosures in Currie and Ferranti were combined, the presently claimed invention still would not be obvious to a person of ordinary skill in the art. As recited in amended claims 1, 19, and 21, the handle of Applicant's instrument includes a threaded opening for receiving a tool tip connector. The tool tip is fastened to one end of the connector. The opposing end of the connector includes a threaded stem and this portion is threaded into the opening of the handle. The threads of the stem portion engage the complementary threads of the opening in the handle. In this manner, the tool tip is secured tightly to the handle. The fastening of the tool tip to the connector is described at page 3, paragraph 2 of the specification and shown in FIGS. 2A, 2B, and 2C. Since the tool tip connector is removable in Applicant's device, the dentist can easily replace the connector if he or she wishes to do so. The tool tip connector is interchangeable with other tool tip connectors. Thus, if the tool tip connector fails or wears out for some reason, only the connector, and not the entire instrument needs to be replaced. Applicant's means for connecting the tool tip to the handle is completely different than the connecting mechanism described in Currie.

Currie does not even disclose or suggest a removable tool tip connector. Rather, the probe tip (14) includes a connecting shaft portion (22), an integrated extension of the tip. That is, the probe tip (14) is a single piece structure that includes a shaft (22) on its distal end. The shaft (22) is inserted into the threaded opening (34) of the handle (12). As discussed above, the tip (14) including the shaft portion (22) is made from a relatively soft, flexible plastic such as nylon. The shaft (22) is not threaded but is slightly oversized in order to form a tight interference fit with the threaded opening (34). In order to secure the probe tip (14) in place, a person presses on and twists the tip (14). As the tip is twisted, the threads (70) in the opening (34) of the handle bite into the plastic shaft (22). The threads (70) grip the plastic shaft (22) and lock the tip (14) in place (Col. 4, lines 52-63). In addition, the probe tip (14) includes an integral collar (30) to ensure that the shaft is not inserted too far into the opening (34) of the handle (12) (Col. 3, lines 44-52).

Currie provides no hint or suggestion for a removable tool tip connector having a threaded stem that is threaded into a threaded opening of the handle as presently claimed. A

Serial No.: 10/632,263
Art Unit: 3732

person of ordinary skill in the art looking at the teachings in Currie would have no basis for modifying the probe tip connecting mechanism as described therein. In view of the foregoing, it is respectfully requested that the rejection of claims 1-9 and 11-21 under 35 U.S.C. §103(a) over Currie, U.S. Patent 5,178,537 ("Currie") in view of Ferranti, published U.S. Patent Application 2001/0031443 ("Ferranti") be withdrawn.

Allowable Subject Matter

Applicant acknowledges the statements in the Office Action indicating that Claim 10 contains allowable subject matter.

Conclusion

In summary, Applicant submits that all of the claims as amended are patentable and each of the Examiner's rejections and objections has been overcome. Accordingly, Applicant requests favorable consideration and allowance of amended claims 1-21.

The Commissioner is hereby authorized to charge any additional fee required in connection with the filing of this paper or credit any overpayment to Deposit Account No. 04-0780. Should there be any outstanding matter that needs to be resolved in the present application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Respectfully submitted,

DENTSPLY International Inc.

By: Daniel W. Sullivan

Daniel W. Sullivan

Reg. No.: 34,937

Tel.: (717) 849-4472

Fax: (717) 849-4360

Date: MARCH 27, 2006

Attachments: Petition for Extension of Time